



Early Journal Content on JSTOR, Free to Anyone in the World

This article is one of nearly 500,000 scholarly works digitized and made freely available to everyone in the world by JSTOR.

Known as the Early Journal Content, this set of works include research articles, news, letters, and other writings published in more than 200 of the oldest leading academic journals. The works date from the mid-seventeenth to the early twentieth centuries.

We encourage people to read and share the Early Journal Content openly and to tell others that this resource exists. People may post this content online or redistribute in any way for non-commercial purposes.

Read more about Early Journal Content at <http://about.jstor.org/participate-jstor/individuals/early-journal-content>.

JSTOR is a digital library of academic journals, books, and primary source objects. JSTOR helps people discover, use, and build upon a wide range of content through a powerful research and teaching platform, and preserves this content for future generations. JSTOR is part of ITHAKA, a not-for-profit organization that also includes Ithaka S+R and Portico. For more information about JSTOR, please contact support@jstor.org.

October 27th.

DR. MORTON, President, in the Chair.

The Committee on Mr. Deane's paper, "On the Fossil Foot-prints of the Connecticut River," reported in favor of publication in the Journal.

The Committee on Dr. Townsend's description of a New American Wolf, (*Lupus gigas*, Townsend,) reported in favor of publication in the Journal.

The Committee on the following papers by Dr. Leidy, read at the meetings of October 1, Oct. 8th, and October 15th, 1850, reported in favor of their publication in the Proceedings.

Contributions to Helminthology.

By JOSEPH LEIDY, M. D.

1. *LIGULA TRITONIS*.—Body ribbon-like, thin, translucent, nearly smooth, faintly yellowish white, posteriorly obtusely rounded. Head thickened, rounded, transversely corrugated, yellowish; extremity triangularly rounded, laterally compressed, front and back, with a short, longitudinal, contracted depression.

Whole length 1 in. 9 lines; breadth of body 1-3d line, thickness 1-12th line; length of head 1 line, breadth 1-4th line, thickness 1-9th line.

Habitation and Remarks.—This species was sent to me by my friend Prof. S. F. Baird, of Carlisle, with the note "Found imbedded in the muscles of the back of Triton (*Cynops dorsalis*)." It is the smallest species which has as yet been discovered, and the first among batrachian reptilia. The specimen sent to me consisted of two fragments of the same individual preserved in alcohol. Examined beneath the microscope it presented no trace of articulation or interior definite organs.

2. *PENTASTOMUM Didelphidis Virginianæ*.—Body subcylindrical, curved one-third or one-half a circle, dorsum convex, ventrum concave, posteriorly narrowed and constricted a short distance from the extremity, which is rounded. Color white, opaque. Composed of forty or fewer annulations. Head posteriorly convex, anteriorly plain or slightly concave; mouth nearly round; hooks simple, situated in a curved line of which the mouth forms the centre.

Whole length 3 to 5 lines, breadth 3-5th of a line; annuli generally 1-80th inch wide; mouth 1-200th inch in diameter; hooks 1-200th inch long.

Habitation and Remarks.—I found 9 individuals of this entozoon, in C. shaped cysts, the circle being two lines in diameter, imbedded in the liver just beneath the peritoneal surface, in *Didelphis virginiana*. It may probably be the *Pentastomum subcylindricum* of Diesing,* which was found in cysts upon the liver of two South American species of *Didelphis*, and several other animals, but the largest of those found in our *D. virginiana*, is equal only to the smallest of *P. subcylindricum*, and has not more than one-half the number of annulations.

* Annal. d. Wien. Mus. 1, p. 21. *Dujardin*. Hist. Nat. des Helminthes, p. 305. *Diesing*. Systema Helminthum, Vol. I. p. 611.

3. PENTASTOMUM EURYZONUM, *Diesing*.

Linguatula Diesingii, *Van Beneden*; Bull. de l'Acad. Roy. des Sc. de Brux. 1848; Mem. de l'Acad. de Brux. xv. An. Sc. Nat. 3 ser. xi.

Pentastomum euryzonum, *Dies*. Syst. Helminth.

Body cylindroid fusiform, curved, posteriorly subacute. Color yellowish white, opaque. Annulations under 20, with wide intervals. Head plano-convex; mouth round.

Whole length 6 lines; breadth anteriorly 1 line, of antepenultimate annulus 3-5ths of a line. Mouth 1-40th of an inch.

Habitation.—I found five individuals of this species, enclosed in C shaped cysts, upon the surface of the liver beneath the peritoneum, in a half-grown *Cynocephalus porcarius*.

4. PENTASTOMUM PROBOSCIDEUM, *Rud*.

Echinorhynchus Crotali, *Humboldt*. Ansicht d. Natur. 1 Aufl.

Distoma Crotali, *ib.*; *Rud*. Entoz. hist. II.

Porocephalus Crotali, *Humb*. Recueil d'Obs. de Zool.

Polystoma proboscideum, *Rud*. Mag. d. Berl. Gesell. Nat. Fr. VI.

Linguatula proboscidea, *Van Beneden*, Mem. d' l'Acad. de Brux. XV.

Linguatula clavata, *Wyman*. Jour. Bost. Nat. Hist. Soc. Vol. V.

Pentastomum proboscideum, *Rud*. Synop.; *Humb*. Ans. d. Nat.; *Bremser*, Icones; *Diesing*, An. d. Wien. Mus.; Syst. Helminth. I.

Body sub-clavate, broadest anteriorly, recurved, posteriorly dilated, ovate, sub-acute. Color yellowish white; integument translucent. Annulations 36, becoming indistinct toward the extremities. Head round, mouth round. Male furnished with two short projecting papillæ just above the mouth; penis papillaform, projecting 1-4th of a line.

Length of female $2\frac{1}{2}$ to $3\frac{1}{2}$ inches, breadth of head $2\frac{1}{2}$ lines, narrowest part of body 1 line, just anterior to posterior dilatation, which latter is 3 lines long by $1\frac{1}{2}$ broad. Length of male 1 inch 3 lines to 1 inch 5 lines; breadth of head $1\frac{1}{2}$ lines; narrowest part of body $\frac{1}{2}$ line; breadth of posterior dilatation 3-5ths of a line.

Habitation and Remarks.—I found six females, four males, and a young individual of this species $4\frac{1}{2}$ lines long in the pulmonary cavity of a *Boa constrictor*. The form of the body in the male and female is the same.

5. ECHINORHYNCHUS OVATUS.—Body compressed ovate, posteriorly subacute, curved, yellowish white, opaque, presenting 12 to 14 transverse corrugations; neck distinct, short, cylindrical. Proboscis globular, armed with 6 rows of recurved hooklets.

Length 2 lines, greatest breadth 1-10 inch, greatest thickness 3 5 line. Proboscis $\frac{1}{2}$ line.

Habitation.—Two individuals were found in the iliac portion of the small intestine of *Felis leopardis*.

6. ECHINORHYNCHUS TORTUOSUS.—Body brownish white, opaque, very much contorted and transversely corrugated, subcompressed, dilated just below the middle, attenuated towards the extremities, most so anteriorly, posteriorly recurved and obtuse. Neck short. Head subglobular, armed with 4 rows of simple recurved hooklets.

Length 2 inches 8 lines; greatest breadth 1-7 inch; greatest thickness 1 line diameter; 1 line from the neck, 1-5 of a line; from the posterior extremity 4-5 of a line. Proboscis and neck 1-5 line long.

Habitation.—Found with the anterior 3 lines of its length buried in an oval tumor, 4 lines in diameter, in the mesentery of a *Didelphis virginiana*.

7. *ECHINORHYNCHUS Pici collaris*.—Body white, opaque, subcylindrical, sub-compressed and curved posteriorly, transversely corrugated, and slightly so longitudinally, moderately dilated anteriorly. Neck very short. Proboscis short, cylindrical, contracted in the middle, with the free extremity rounded and furnished with 4 rows of simple recurved hooklets.

Length 1 inch 8 lines, breadth anteriorly 1-10 inch, thickness 1-12 inch; posteriorly 4-5 line broad by 3-5 line. Proboscis 4-5 line long, thickness $\frac{1}{2}$ line.

Habitation.—Intestine of *Picus collaris*.

Remarks.—Differs from the *E. Pici*, Goeze* which has a long linear proboscis with 8 or 10 ranges of hooklets, and is narrower in front than behind, just the reverse of the species just described.

—
Notes on the Development of the Gordius aquaticus.

By JOSEPH LEIDY, M. D.

Just four years ago I exhibited to the Academy a mass of living hair-worms or *Gordius aquaticus*, consisting of fourteen individuals strangely knotted together, and recalling the appropriateness of the Linnæan name.

It is a vulgar opinion that the *Gordius* is a horse hair which has become vivified from maceration for several weeks in a spring or pool of fresh water, an error which has probably arisen from their frequently being found in water filling a wagon rut, or the drinking trough of a horse. I have even been informed by some persons, though by those not given to observe such matters, that they had perceived the direct transmutation of horse hairs into writhing worms, and I was at one time so silly as to be led to try the experiment, with what success it is unnecessary for me to state.

The *Gordii* alluded to in the mass, were blackish brown in color, from 6 to 10 inches in length, and most of them had attached to the posterior extremity of the body a long, white, opaque cord, in several instances nearly as long and as thick as the worms themselves. These cords some of the members may recollect I pointed out at the time as being strings of the ova of the *Gordii*, but I then was not so well acquainted with the history of the *Gordius* as at present; that is to say, I did not know that we have no knowledge whatever of its origin or development, and although through curiosity I traced for a few days the development of the embryo in ova, yet I did not do it with that care which its importance demanded. But however imperfect have been the observations made, with this acknowledgment, I have thought it would be well to record them, with the hope that they may not only throw some light upon the obscure nature of the *Gordius*, but also lead others to the discovery of a similar opportunity of investigating this animal under more favorable circumstances of locality and information. The observations I have withheld for a length of time, in the hope that I might be able to verify or correct them, but failing to do so to the present time, I now reluctantly put them forth from my notes taken at the time.

The white cords before mentioned consisted of numerous oval ova closely

*Naturgeschichte S. 151, Taf. 11.

aggregated together. These when examined beneath the microscope, on the first day after I obtained them, exhibited a white, granular yoke divided into four globular masses connected together and surrounded by a transparent albumen. Each mass contained in its centre a clear cell or vesicle. On the second day the separation among the yolk masses was less distinct and upon the third day the whole had united into one oval, finely granular body, and the interior vesicles had disappeared. The fourth and fifth days no perceptible change was observable. From the sixth to the eighth day the yolk had become conical in form, and upon the ninth day the base of the cone exhibited a cleft or fissure which by the tenth day had extended two-thirds of the length of the mass. During the whole of this period the yolk retained its granular character and was motionless. Upon the eleventh day it resembled a cylinder doubled upon itself, or the outline of the embryo had been forward, and one extremity of it, corresponding to the head, had become translucent from a solution of the granular-matter within. The other or tail end was subacute. The twelfth day the translucency had extended itself in the interior part of the embryo, the extremity of which had advanced beyond the others, and presented an emargination communicating with an orifice opening into a canal visible in the interior, and from the edge of the extremity was developed a circle of short filaments which projected downwards and outwards. From the thirteenth to the fifteenth day the granular matter had entirely undergone solution within the anterior half of the embryo, and the latter had become somewhat dilated. The interior canal was also more distinct, and the bordering filaments of the extremity were larger. In the course of the sixteenth to the eighteenth day the translucent half of the animal was separated from the other by a constriction, and the canal in the interior presented at its anterior portion a clavate tubular body, the free end of which projected from the oral aperture. The extremity of the head was surrounded by a reflected collar from the free border of which projected the filamentary appendages. The posterior half of the embryo was still granular in appearance, but had become rounded and somewhat dilated at the extremity. From the nineteenth to the twentieth day, the embryo alternately retracted and protruded the tentacular or filamentary appendages, and the integument of the anterior half of the body appeared to be getting annulated, which was distinctly so by the twenty-first day. The granular matter in the posterior part of the body was also undergoing solution from the periphery towards the centre, and at its posterior part there appeared several large oil globules. On the twenty-second day the annulations of the anterior half of the body were very distinct, the posterior half was also becoming annulated, and near its extremity I for the first time observed an anal orifice and one to four small epidermal spines. On the twenty-fourth day the tubular clavate organ before mentioned, occupying the anterior part of the alimentary canal, was alternately protruded and retracted as a proboscis. The proboscis when fully protruded brought into view at its base, a second circle of tentacular filaments within the first. On the twenty-sixth day the embryo when pressed from the egg progressed forward by moving the posterior half of its body from side to side, and it alternately protruded and retracted the proboscis and the two circles of tentacular filaments. When all the latter organs were retracted, the head presented a truncate or depressed surface, and in their protrusion the extremities of the outer circle of

tentaculæ and the end of the proboscis first became visible; as these advanced the second circle of tentaculæ appeared, and when the proboscis was entirely protruded, the outer tentaculæ were deeply reflected upon the outside of the body, and the inner circle projected obliquely outward and upward. The proboscis was clavate in form, or cylindrical and moderately dilated at its free end, and more so at its base. The following six days no perceptible change was observable in the development of the animal, and after this the eggs showed evident appearances of decay, and I gave them no further attention.

Two new species of Infusorial Entozoa.

By JOSEPH LEIDY, M. D.

1. *NYCTOTHERUS OVALIS*.—Body translucent, oval, posteriorly obtuse. Anterior granular areola three-sided. Posterior fissure passing downwards.

Length 1-100th inch, breadth 1-33d inch.

Habitation.—The intestine tenue of the *Blatta orientalis*, occasionally in considerable numbers.

2. *BODO JULIDIS*.—Body translucent, faintly greenish, faintly granular, with one or two large round vacuolæ and numerous minute ones; form changing, usually globular, oval or pyriform; caudæ twice the length of the body, very active, frequently twisted into a ring at the extremity. Diameter of body 1-3000th of an inch.

Habitation.—The large intestine of *Julus marginatus*, in company with *Nyctotherus velox*, often in millions.

Description of some Nematoid Entozoa infesting Insects.

By JOSEPH LEIDY, M. D.

Genus *Aorurus*. Sub-genus *Streptostoma*. Proc. Acad. Nat. Sci. 1849, p. 230.

1. *STREPTOSTOMA GRACILE*.

Oxyuris Diesingii, *Hammer Schmidt*. Isis von Oken, J. 1838, S. 354, Taf. iv. Fig. 6.

Body attenuated from the middle anteriorly and posteriorly, white, translucent, shining. Anterior annuli very broad and moveable upon one another. Oral annulus short, truncate; second annulus long, constricted in the middle. Tail nearly one-third the length of the body, shining, straight, or curved. Pharynx short. Œsophagus consisting of two elongated, pyriform, muscular bulbs. Neck of the first Œsophageal bulb dilated at commencement and middle; neck of second, long, narrow, and cylindrical. Ventriculus largely dilated and oval at commencement, afterward cylindrical.

Length of body 1 line; breadth opposite ventricular dilatation 1-136th inch; just above anus 1-300th inch; greatest do., 1-107th in.; length of tail 1-40th inch; breadth at middle 1-1360th inch; length of first pyriform bulb of Œsophagus 1-150th inch; breadth of neck of do. 1-1100th inch; do. of body of do. 1-400th inch; length of second bulb 1-214th inch; breadth of neck 1-1300th inch; do. of body 1-340th inch; do. of dilated commencement of ventriculus 1-214th inch; do. of cylindrical portion 1-330th inch.

Ova oval, 1300th inch long by 1-625th inch broad.

Habitation.—Found in numbers of one to half a dozen in the small intestine of our domestic cockroach, (*Blatta orientalis*.) This species was discovered by

Hammerschmidt, who named it *Oxyuris Diesingii*, but as it is considered a doubtful compliment to name intestinal worms after persons, in placing it in the genus *Streptostoma*, I have also changed the specific name. The individuals from which my description is taken were the largest I found.

Sub-genus *Thelastoma*. Proc. Acad. Nat. Sci. 1849, p. 231.

2. *THELASTOMA APPENDICULATUM*.—Body cylindrical, narrowed anteriorly and posteriorly, white, translucent, shining, strongly annulated. First division of the œsophagus moderately long, cylindrical; second portion short, broad, and pyriform, ventriculus dilated cordiform at commencement, becoming rapidly narrowed and cylindrical, and sending off posteriorly a large and long pyriform diverticulum or coecum, afterward cylindrical to termination, and forming a single short convolution just posterior to the generative aperture. Tail straight, spiculate, one-fourth the length of the body. Eighty-five annulations to the body, of which there are twenty-eight from the mouth to the commencement of the ventriculus. Generative aperture twenty-six annulations from the anal aperture. Last annulation furnished with two short spines projecting backward.

Length of body 1 line to 1-10th of an inch; breadth at ventricular commencement 1-100th inch, at middle 1-80th inch, at anus 1-160th inch; tail 1-50th inch long, breadth at middle 1-88th inch; first portion of œsophagus 1-80th inch long, 1-533d inch broad; second portion 1-240th inch long; neck of do. 1-666th inch broad; body of do. 1-250th inch; commencement of ventriculus 1-200th inch broad; cylindrical portion 1-400th inch; diverticulum of ventriculus 1-66th inch long by 1-266th inch broad.

Ovum semi-oval, 1-258th inch long, by 1-666th inch broad.

Habitation.—Found in the intestinum tenue of the domestic cockroach (*Blatta orientalis*), with the former.

3. *THELASTOMA LABIATUM*.—Body white, translucent, anteriorly strongly annulated. Papilla of the mouth dilated, six-lobed. First portion of œsophagus cylindrical, second portion broad, pyriform; ventriculus sub-cordiform at commencement. One hundred and fifty annulations, of which there are forty from the mouth to the commencement of the ventriculus.

Length of body 1-22d inch; greatest breadth 1-200th inch; length of tail 1-40th inch; length of first portion of œsophagus 1-120th inch; breadth 1-1000th inch; second portion 1-320th inch long by 1-400th broad; breadth of ventricular dilatation 1-266th inch.

Ovum oval, 1-333d inch long, by 1-500th inch broad.

Habitation.—Found in numbers of from one to a dozen in the intestine of *Polydesmus virginienensis*.

4. *THELASTOMA ROBUSTUM*.—Body white, cylindrical, narrowed anteriorly and posteriorly. First portion of œsophagus long, cylindrical; second portion broad, pyriform. Commencement of ventriculus dilated, oval, afterwards cylindrical. Articulations of body 212, of which there are forty from the mouth to the commencement of the ventriculus, 102 from the latter to the generative aperture, and from this to the tail 70.

Length of body 2 lines; breadth at ventricular dilatation 1-75th inch; at sixth annulation from the mouth, only 1-320th inch; at middle 1-66th inch; just above anus 1-75th inch; tail 1-22d inch long by 1-1000th inch broad at middle; first portion of œsophagus 1-50th inch long by 1-500th inch broad;

second portion 1-178th inch long by 1-200th inch broad; ventricular dilatation 1-105th inch broad.

Ovum oval, 1-308th inch long by 1-500th inch broad.

Habitation.—Found in the intestine, in numbers of from one to three, in the larva of a lamellicorn insect.

Remark.—The descriptions of the above are entirely taken from females, considerable numbers of which I have found and possess, but I have never yet been able to discover a single male.

5. *OXYURIS SOCIALIS*.—Body white, narrow, cylindrical, elastic, posteriorly attenuated; mouth projecting, with a short pharynx; œsophagus consisting of two portions: first portion long, cylindrical, dilated at its posterior part; second portion, narrow, pyriform; ventriculus moderately dilated at commencement, capacious, cylindrical; tail long, narrow, acute.

Female.—From 1 line to 2 and 1-5th lines in length; breadth 1-266th inch. First portion of œsophagus 1-66th inch long, 1-800th inch broad; second portion 1-200th inch long by 1-666th inch broad. Generative aperture projecting, just anterior to middle. Tail simple pointed, 1-57th inch long from anus, 1-400th inch broad at base.

Ovum oval, white, 1-363d inch long, 1-666th inch broad.

Male.—Length 4-5ths to 3-5ths of a line; breadth 1-400th inch; posteriorly recurved. Tail pointed, furnished with five minute epidermoid prominences on the inner side, 1-133d inch long from anus. Spiculum of penis single, simple, curved, 1-400th inch long.

Habitation.—Found in numbers of from five to twenty, of which one-fifth are males, in the large intestine of the large black cricket (*Acheta abbreviata*.)

Genus *Hystriognathus*.—Body cylindrical, anteriorly furnished with transverse rows of simple spines projecting backward; mouth surmounting a large naked papilla; œsophagus of two portions; the first long, cylindrical, the second short and pyriform; annulations indistinct posteriorly; tail long.

6. *HYSTRIGNATHUS RIGIDUS*.—Body straight, rigid, cylindrical, narrowed anteriorly and posteriorly; anteriorly furnished with 106 transverse rows of simple spines projecting obliquely backward, each row corresponding to an annulation and containing about sixteen spines; anterior spines longest, equal to the width of the annulations, becoming shorter posteriorly and decreasing to mere points. First annulation of the mouth truncated, conical, smooth; second annulation smooth. Pharynx extending through the first two annulations. First portion of œsophagus long, cylindrical; second portion with a narrow cylindrical neck and globular body; ventriculus cylindrical, slightly dilated anteriorly, narrowed anteriorly; rectum elongated conical. Tail long, curved. Generative aperture very near the middle of the body.

Length 2 lines; greatest breadth 1-140th inch; tail 1-40th inch long from anus, 1-1000th inch broad at middle; anterior or spinous portion of body 1-26th inch long or one fourth of the whole length. First portion of œsophagus 1-50th inch long, 1-520th inch broad; second portion 1-190th inch long, 1-320th inch broad at body. Anterior spines 1-2000th inch long. Fifty-eight spinous annulations corresponding to the first portion of the œsophagus, twelve to the second portion. Annuli posteriorly indistinct.

Ova oval, 1-214th inch long, by 1-545th inch broad.

Hab.—The female only I have found in numbers of one to five within, and adhering by the mouth to the parietes of the ventriculus of *Passalus cornutus*.

The Committee on the following paper by Mr. Cassin, read at last meeting, reported in favor of publication in the Proceedings.

Descriptions of new species of Birds of the Genera Parus, Linn.; Emberiza, Linn.; Carduelis, Briss.; Myiothera, Ill.; and Leuconerpes, Sw., specimens of which are in the collection of the Academy of Natural Sciences of Philadelphia.

By JOHN CASSIN.

1. *Parus annexus*, nobis.

Form.—Crested; bill strong, conical; fourth and fifth quills longest and equal, wings and tail rather long, crest pointed.

Dimensions.—Total length (of skin) from tip of bill to end of tail about 5 inches, wing $2\frac{1}{2}$, tail $2\frac{1}{4}$ inches.

Colors.—Sex unknown. Anterior feathers of the crest black at their bases and cinereous at their tips, the most elongated of the succeeding entirely black, others margined with white, shorter occipital feathers black; chin and throat black. Wide line from above the eye running into the crest, thence around upon the side of the neck, white. Line commencing behind the eye, running thence around and uniting with the space of the same color upon the throat, black, cheeks white. Entire superior surface cinereous, tinged with olive, quills and tail feathers brownish black, primaries narrowly edged externally with white, secondaries and tail feathers edged externally with ashy olive. Body beneath ashy white, darker upon the breast. Bill black.

Hab.—Texas, upon the Rio Grande, discovered by Mr. John Woodhouse Audubon.

Obs.—This very remarkable species, discovered in Texas by a son of the illustrious naturalist of the same name, is marked upon the head more like the *P. cristatus* of Europe than any other American species yet known. It does not resemble that species in any other character, however, being more strictly related to *P. bicolor*, Linn. and *P. inornatus*, Gamb., and like them belonging to the genus *Lophophanes*, Kaup.

2. *Parus atricristatus*, nobis.

Form.—Crested, wings and tail rather long. Crest pointed as in *P. bicolor*, Linn., bill strong, conical. Specimen now described not in mature plumage.

Dimensions.—Total length of skin from tip of bill to end of tail about 5 inches, wing $2\frac{3}{4}$, tail $2\frac{1}{2}$ inches.

Colors.—Sex unknown. Crest black, front and under parts of the body ashy white, flanks ferrugineous; entire superior surface cinereous, darker upon the wings and tail, and inclining to olivaceous upon the back. Bill and legs black. Shafts of primaries reddish at their bases, those of the tail feathers white beneath.

Hab.—Texas, on the Rio Grande, discovered by Mr. J. Woodhouse Audubon.

Obs.—This species is of the same general form and color as *P. bicolor*, Linn. and *P. inornatus*, Gamb.; smaller than the former, but about the size of the latter. It may be easily recognized by its black pointed crest and white front, which, so far as I know, are peculiar characters. This species, like the preceding, was discovered in Texas by Mr. Audubon, and belongs to the same genus.

3. *Emberiza bilineata*, nobis.

Form.—Bill strong; wings short, with the second, third and fourth prima-

ries longest and nearly equal, some of the secondaries emarginate. Legs and feet rather long. Aberrant, may not belong to this genus.

Dimensions.—Total length of skin from tip of bill to end of tail about 5 inches, wing 2 and 4-10ths, tail 2 and 2-10th inches.

Colors.—Sex unknown. Line from the nostril running above the eye towards the occiput, and another from the angle of the lower mandible running upon the side of the neck, white, space between those lines including the nares and plumage under the eye and the ears, nearly black. Throat from the base of the bill, black, which color is bounded on each side by the white lines from the angles of the lower mandible, and continues to a somewhat rounded point upon the breast. Head and body above dark cinereous, inclining to brownish upon the back and wing coverts. Quills brownish. Tail brownish black, external feathers having their outer webs pure white and tipped with the same color, the brown color of these feathers extending narrowly along the shafts into the white tips. Body beneath white, tinged with cinereous. Bill bluish horn color.

Hab.—Texas, on the Rio Grande, discovered by Mr. John Woodhouse Audubon.

Obs.—This is one of the most remarkable finches yet discovered in America, and is quite unlike, even in general appearance, any other species of this country with which I am acquainted. This bird was also brought from Texas by Mr. Audubon.

4. *Emberiza Belli*, nobis.

Form.—Wings rather short, second, third and fourth quills longest and nearly equal. Tail and legs rather long.

Dimensions.—♂ Total length of skin from tip of bill to end of tail about 5½ inches, wing 2¾, tail 3 inches.

Colors.—♂ Head and neck above cinereous, shading into olive upon the back and neck.

Frontal spots on each side of the base of the bill, (scarcely united) narrow ring around the eye, and entire under surface white. Edge of the wing at flexure, yellow; superior wing coverts brown tinged with ferruginous, quills and tail brownish black, nearly all the feathers of both narrowly edged with whitish, most apparent upon both webs of the external tail feathers. Conspicuous spot upon the breast, nares, and lines from the external angles of lower mandible running downwards upon the sides of the neck, deep brownish black. Flanks tinged with rufous and with a few longitudinal stripes of brown.

♂ Slightly smaller, flanks and interior tail coverts more tinged with rufous.

Hab.—California, near Sonoma and San Diego; discovered by Mr. John G. Bell.

Obs.—This species resembles in rather a remarkable degree the *Emberiza hypochondria*, D'Orb. Voy. Merid. Ois. pl. 45, fig. 1, but is smaller and without the deep castaneous flanks of that species. In the bird now described, the dark spot upon the white breast is a striking feature, and is much more strongly pronounced than in any other with which I am acquainted.

I have named this species in honor of Mr. John G. Bell, of the city of New York, a gentleman possessing a very extensive knowledge of natural history, and whose attachment to the pursuit of which, induced him to make the visit to California, which resulted in the discovery of this and other interesting birds.

The following is Mr. Bell's note relating to this species: "This bird I shot first near Sonoma, and afterwards at San Diego; its habits much resemble those of the painted bunting, (*S. ciris*.) I observed several of them amongst the wormwood at the edge of the hills, sitting on the tops of the small bushes, singing, and when disturbed would dart downwards. The song is quite unlike that of any of our finches, rather low and plaintive, and perhaps most resembles that of the Swamp sparrow, (*Amm. palustris*.) It is neither a very active nor a shy bird, and was not rare at the localities mentioned."

In a collection of birds deposited in this Academy by Mr. E. L. Kern, and collected by him while with the expedition of Col. Fremont, in 1846, there is a specimen of a young bird very much resembling that now described, but much larger, being about the size of the *E. hypochondria*, D'Orb., and is, I think an unknown species. The specimen is not only in bad plumage, but so much injured as scarcely to admit of being mounted.

5. *Carduelis Lawrencei*, nobis.

Form.—Bill rather conical, three outer primaries longest and nearly equal; tail coverts long, tail emarginate.

Dimensions.—Total length of skin from tip of bill to end of tail about 4½ inches, wing 2 and 8-10ths, tail 2 inches.

Colors.—♂. Head above and a small space around the bill and upon the throat black; head behind and sides of the neck pale cinereous, shading into fine brownish olive upon the back, and into a paler cinereous upon the sides under the wings, nearly white upon the abdomen and inferior tail coverts. Lesser and exposed portion of greater wing coverts, rump, breast and belly fine pale yellow; upper tail coverts cinereous. Spurious wing, black, conspicuous.

Quills brownish black, primaries and succeeding and secondaries externally edged with yellow; shorter secondaries edged and tipped with ashy white. Tail brownish black, the external feathers each with a large spot of white on its inner web, very conspicuous.

Hab.—Sonoma and San Diego, California, discovered by Mr. John G. Bell.

♀. without black upon the head or throat, those parts being brownish olive; the yellow color upon the inferior surface more restricted.

Obs.—This beautiful little bird resembles no other *Carduelis* which has come under my notice. Mr. Bell's note respecting it is as follows: "This bird I first observed at Sonoma. In habits it much resembled our common Goldfinch (*C. tristis*.) The flock, out of which I shot these two, was feeding in company with the small black headed species (*C. psaltria*), on the seeds of plants growing near the ground, and when disturbed alighted upon the nearest bushes. When flying they keep up a constant chattering or calling like our common species. I also saw this bird at San Diego, feeding as above in company with the crimson fronted Bullfinch, (*Erythropsiza frontalis*), in the open prairie. I never saw it in the mountains."

I have named this bird in honor of Mr. George N. Lawrence, of the city of New York, a gentleman whose acquirements, especially in American Ornithology, entitle him to a high rank amongst naturalists, and for whom I have a particular respect, because, like myself, in the limited leisure allowed by the vexations and discouragements of commercial life, he is devoted to the more grateful pursuits of natural history.

6. *Myiothera nudiceps*, nobis.

Form.—Upper part of head bald or with a few bristle like feathers, wing with the fifth quill slightly longest, tail short, legs long. General form much like *M. longipes*, (Vieill.)

Dimensions.—Total length of skin from tip of bill to end of tail about $6\frac{1}{4}$ inches, wing 3 and 1-8th, tail $2\frac{1}{4}$ inches.

Colors.—♂. Naked space upon the head blue. Entire plumage black. Wing coverts delicately edged with white, which is also the color of the basal portion of the feathers of the back, (apparent only upon raising them.) Irides white.

Hab.—Panama; discovered by Mr. John G. Bell.

Obs.—This species may readily be distinguished from others of its genus by its bald head, the naked skin of which in the living bird is, as Mr. Bell informs me, "Mazarine blue." His note is as follows: "These birds keep on the ground, running and scratching among the leaves, like the others of the same family which I send, and somewhat like our small Thrushes, (*M. mustelina* and *solitaria*.) They were constantly calling and singing a short, loud, and very curious song, which varied in several of its notes at different times, and is entirely different from that of any of our birds. This species appeared to me to be rather a stupid bird, and was easily approached; it has a habit of puffing up the feathers on its back; the head in recently killed specimens in beautiful Mazarine blue. It was represented to me as a very rare bird by several residents at Panama."

7. *Leuconerpes albolavatus*, nobis.

Form.—Robust, wings with the fourth primary longest, secondaries broad, abruptly terminated, sub-emarginate; tail rather long, with the feathers soft at the ends. Legs and feet rather slender.

Dimensions.—Total length of skin from tip of bill to end of tail about 9 inches, wing 5, tail $3\frac{1}{2}$ inches.

Colors.—♂. Wide mask including greater part of the head and extending upon the breast, white, which is also the color of a basal portion of both webs of the primaries, and upon the outer webs in a few feathers extends for two-thirds of their length. Narrow occipital band scarlet. All other parts, including body above and below, wings and tail, black.

♀. Similar, but rather smaller, and without the occipital band of scarlet.

Hab.—Near Sutter's mill, California, discovered by Mr. John G. Bell.

Obs.—Mr. Bell's note accompanying this very interesting species is as follows: "I shot this bird at the Oregon canon, near Georgetown, about 12 miles from Sutter's mill; it seemed to prefer the tall pine trees, and generally kept very high. In habits it appeared very much like the *P. villosus*. Its note is clear and sharp, and it is very active and lively in its movements." Has no near relative yet discovered in North America, and resembles in general characters only the *L. dominicanus*, (Vieill.) Spix. Av. Bras. pl. 50.

ELECTION.

Dr. John Evans, of New Harmony, Indiana, was elected a *Correspondent* of the Academy.